Doctors Technology Office

TECHNOLOGY BULLETIN

Create Complex Passwords You Can Write-Down

Target Audience

This bulletin is intended for physicians and local IT specialists.

Objective

To introduce an easy method to create passwords that are complex, easy to remember and can be written down.

Brief Description

The best password is not to have to use passwords, and until we have better and cheaper biometric security devices, passwords are still needed. Everyone knows the more complicated a password is, the harder it is for hackers to discover it. The trouble is, how do we remember complex passwords, or come up with complex passwords.

Here is a systematic method to create passwords so they are complex, yet easy to remember and can be written down.

Why are these two passwords considered complex, and yet, hard for you to forget?
BCMA@@604 and **DOBC$$250**

Solution:

Create complex passwords by combining three unique parts. Each part must consist of data you **ALREADY know and remember**.

Encryption System: Combine part1 + part2 + part3 to create your password.

Examples of ways to create these three "Parts":

	Part 1	Part 2	Part 3
Definition	Use an Acronym	Use a special keyboard character	non-repeating, number(made up of)
E.g.	BCMA *	@	6 0 4
Denoted	**S1**	**WITH or W**	**1st; 2nd; 3rd**

Part1 + Part2 + Part3 or **'S1+2W+123'** to represent the actual password which is **'BCMA@@604'**

Author: Patrick Wong *Original Date Created: 2016-06-07 (updated 2018-03-21)*

**Avoid common acronyms such as BCMA. "BCMA" was used to make the example easier to follow. Instead, create unique acronyms as described on the top of page 2.*

(The REAL non-repeating number should be an EIGHT digit number **and well known to you already**.)

- You can vary the order of your non-repeating number.
  - 123 = 604
  - 321 = 406

With this method, you can even write them down. No one would understand your encryption system.

S1-3W-123 is actually BCMA@@@604 or **S1-Wout-321** is actually BCMA406

Additional methods to create Part 1 - denoted by (S1):

- Using a phrase would be harder to guess. (avoid texting typed phrases such as "lol" etc.)
  - "I love Paris in springtime" would then be "IlPis"
- Unique industry acronym (be leery of common acronyms)
  - PITO or p1T0 (old acronym no longer being used)
- Favorite city in another language
  - Cologne written as Koln or k0Ln (small k, zero, capital L, small n)

Additional examples of Part 2 (special characters): ~ ! @ # % ^ & * ( ) denoted by "with","w" or “Wout”.

Additional methods to create Part 3: (8 digit number)

- Portions of two membership numbers
- Old house number + new house number + street number
- Out of town area code + last 3 digits of a cell number + old apartment number
  - NY city area code = 845
  - Portion of my cell number = 367
  - Old apartment number = 21

Assume you know this eight digit number backward and forward							
8	4	5	3	6	7	2	1
1st	2nd	3rd	4th	5th	6th	7th	8th

By using the examples above, the passwords are now even harder to hack.

- S1 w 2nd 3rd 4th 5th = S1 W 2345 = IlPis&4536
- S2 w 1234 = p1T0&8453
- S3 wout 5678 = k0Ln6721

Having more than **ONE** Part 1 and more than **ONE** Part 2 add variety.

The key to the whole encryption system is Part 3, the eight digit, non-repeating number **that you must already know very well**. By changing which number you begin with, it’s a totally different number.

Create a different pin for every card and token you have: (when you do not need all eight digits)

- My BMO credit card security number is 1234 = 8453
- My VISA bank card number is 2345 = 4536
- My HSBC debit card number is 123456 = 845367
- When I am given a temporary token number 6431, I write it on the back as 5248
  - When I have a chance, I change it to my first 4 numbers 1234 = 8453

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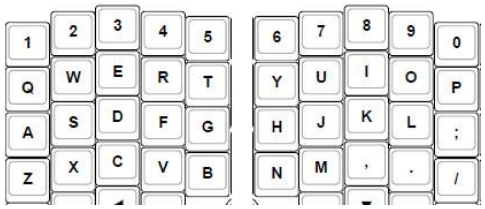
Part 1 and Part 3 can also be created using your typical keyboard.

to



Letters to Numbers.

Map the letter "Q" to the number "1" and so forth.

Letters to Numbers and Numbers to Letters									
1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
A	S	D	F	G	H	J	K	G	;
Z	X	C	V	B	N	M	,	.	/

"Patrick" can be converted to the number "0154838"									
P	A	T	R	I	C	K	Patrick	=	0154838
0	1	5	4	8	3	8			

Numbers to Letters.

Map the number "6" to the letter "Y" depending on which roll and so forth.

(604) 638-5841 can be converted to the letters YEITIOQ or HDKGKGA or NC,B,BZ									
6	3	8	5	8	4	1			
Y	E	I	T	I	O	Q	Phone	=	YEITIOQ
H	D	K	G	K	G	A	Phone	=	HDKGKGA
N	C	,	B	,	B	Z	Phone	=	NC,B,BZ

In other words, depending on the roll you decide to use, 638-5841 can be:

S1	=	YEITIOQ
S2	=	HDKGKGA
S3	=	NC,B,BZ

Please do not attempt this on your own, but rather work with your local IT support vendor.

If you have any questions, want to suggest a topic, or would like more information contact:

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